

CLAIMS

1. A method of manufacturing a superconducting wire (1), comprising the steps of:

5 drawing a wire (1a) formed by coating raw material powder (2a) for a superconductor with a metal (3a) (S3),

rolling said wire (1a) after said step of drawing (S3) (S8), and

sintering said wire (1a) after said step of rolling (S8) (S10),

10 wherein said method further comprises the step of holding said wire (1a) under a reduced-pressure atmosphere in at least one of an interval between said step of drawing (S3) and said step of rolling (S8) and an interval between said step of rolling (S8) and said step of sintering (S10) (S4, S7, S9).

15 2. The method of manufacturing a superconducting wire (1) according to claim 1, wherein said reduced-pressure atmosphere has a pressure of not more than 0.01 MPa.

3. The method of manufacturing a superconducting wire (1) according to claim 1, wherein said step of holding (S4, S7, S9) is performed for not less than 72 hours.

20 4. The method of manufacturing a superconducting wire (1) according to claim 1, wherein said wire (1a) is held at a temperature of not less than 80°C in said step of holding (S4, S7, S9).

25 5. The method of manufacturing a superconducting wire (1) according to claim 1, wherein said step of holding (S4, S7, S9) is performed in an atmosphere of nitrogen gas, argon gas, or dry air.

6. A method of manufacturing a superconducting wire (1), comprising the

steps of:

drawing a wire (1a) formed by coating raw material powder (2a) for a superconductor with a metal (3a) (S3),

rolling said wire (1a) n times (n is an integer not less than 2) (S8, S12), and

5 sintering said wire (1a) n times (S10, S14),

wherein the step of first rolling (S8) in said step of rolling said wire (1a) n times (S8, S12) is performed after said step of drawing (S3),

the step of first sintering (S10) in said step of sintering said wire (1a) n times (S10, S14) is performed after said step of the first rolling (S8),

10 the step of k-th (k is an integer satisfying $n \geq k \geq 2$) rolling in said step of rolling said wire (1a) n times (S8, S12) is performed after the step of (k-1)-th sintering in said step of sintering said wire (1a) n times,

the step of k-th sintering in said step in sintering said wire (1a) n times (S10, S14) is performed after the step of the k-th rolling in said step of rolling said wire (1a) n times, and

15 said method further comprises the step of holding said wire (1a) under a reduced-pressure atmosphere in at least one of an interval between said step of drawing (S3) and said step of the first rolling (S8), an interval between said step of the first rolling (S8) and said step of the first sintering (S10), an interval between said step of the (k-1)-th sintering and said step of the k-th rolling, and an interval between said step of the k-th rolling and said step of the k-th sintering (S4, S7, S9, S11, S13).

20 7. The method of manufacturing a superconducting wire (1) according to claim 6, wherein said step of holding (S9) is performed in the interval between said step of the first rolling (S8) and said step of the first sintering (S10).

25 8. The method of manufacturing a superconducting wire (1) according to claim 6, wherein said reduced-pressure atmosphere has a pressure of not more than 0.01 MPa.

9. The method of manufacturing a superconducting wire (1) according to claim 6, wherein said step of holding (S4, S7, S9, S11, S13) is performed for not less than 72 hours.

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10. The method of manufacturing a superconducting wire (1) according to claim 6, wherein said wire (1a) is held at a temperature of not less than 80°C in said step of holding (S4, S7, S9, S11, S13).

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11. The method of manufacturing a superconducting wire (1) according to claim 6, wherein said step of holding (S4, S7, S9, S11, S13) is performed in an atmosphere of nitrogen gas, argon gas, or dry air.